Author index for papers in Volume 52

Pages are numbered consecutively through the volume: 1–220, January/March; 221–314, May; 315–536, July/September; 537–664, November.

Abarzhi, S. I.
127 see Fisher, R. T.

Ackaret, J.
275 see Sanda, P. N.

Agarwala, S.
341 see Gopisetty, S.

Agrawal, D.
341 see Gopisetty, S.

Akelbein, J.-P.
319 see Oehme, S.

Alvarado, S. F.
481 see Karg, S. F.

Alves, L. C.
293 see Rivers, J. A.

Andry, P. S., C. K. Tsang, B. C. Webb, E. J. Sprogis, S. L. Wright, B. Dang, and D. G. Manzer
571 *Fabrication and characterization of robust through-silicon vias for silicon-carrier applications*

Andry, P. S.
599 see Dang, B.

Andry, P. S.
553 see Knickerbocker, J. U.

Andry, P. S.
611 see Sakuma, K.

Antonakopoulos, T. A.
493 see Pantazi, A.

Antypas, K.
127 see Fisher, R. T.

Archer, C. J.
69 see Pang, Y.-P.

Argumedo, A. J., D. Berman, R. G. Biskeborn, G. Cherubini, R. D. Cideciyan, E. Eleftheriou, W. Häberle, D. J. Hellman, R. Hutchins, W. Imaino, J. Jelitto, K. Judd, P.-O. Jubert, M. A. Lantz, G. M. McClelland, T. Mittelholzer, C. Narayan, S. Ölçer, and P. J. Seger
513 *Scaling tape-recording areal densities to 100 Gb/in^2*

Asida, S. M.
127 see Fisher, R. T.

Bächtold, T.
493 see Pantazi, A.

Baker, D.
7 see Raman, S.

Bednorz, J. G.
481 see Karg, S. F.

Belluomini, W.
413 see Hafner, J. L.

Bender, C., P. N. Sanda, P. Kudva, R. Mata, V. Pokala, R. Haraden, and M. Schallhorn
285 *Soft-error resilience of the IBM POWER6 processor input/output subsystem*

Berman, D.
513 see Argumedo, A. J.

Berne, B. J.
19 see Zhou, R.

Bernstein, K.
623 see Sri-Jayantha, S. M.

Bhanot, G.
189 see Vranas, P.

Bhatele, A.
159 see Bohm, E.

Bhatele, A.
177 see Kumar, S

Biskeborn, R. G.
513 see Argumedo, A. J.

Blumrich, M. A.
189 see Vranas, P.

Bohm, E., A. Bhatele, L. V. Kalé, M. E. Tuckerman, S. Kumar, J. A. Gunnels, and G. J. Martyna
159 *Fine-grained parallelization of the Car–Parrinello* ab initio *molecular dynamics method on the IBM Blue Gene/L supercomputer*

Bohm, E.
177 see Kumar, S.

Bonaccio, A. R.
493 see Pantazi, A.

Bonan, J.
493 see Pantazi, A.

Bose, P.
293 see Rivers, J. A.

Bothorel, F.
83 see Calandra, H.

Bradshaw, P. L., K. W. Brannon, T. Clark, K. Dahman, S. Doraiswamy, L. Duyanovich, B. L. Hillsberg, W. Hineman, M. Kaczmarski, B. J. Klingenberg, X. Ma, and R. Rees
379 *Archive storage system design for long-term storage of massive amounts of data*

Brannon, K. W.
379 see Bradshaw, P. L.

Breitwisch, M. J.
465 see Raoux, S.

Burr, G. W., B. N. Kurdi, J. C. Scott, C. H. Lam, K. Gopalakrishnan, and R. S. Shenoy
449 *Overview of candidate device technologies for storage-class memory*

Burr, G. W.
465 see Raoux, S.

Butler, E.
341 see Gopisetty, S.

Butler, E.
353 see Gopisetty, S.

Cabral, C., Jr.
265 see Gordon, M. S.

Cabral, C., Jr.
225 see Heidel, D. F.

Caimi, D.
481 see Karg, S. F.

Calandra, H., F. Bothorel, and P. Vezolle
83 *A massively parallel implementation of the common azimuth pre-stack depth migration*

Calder, A.
127 see Fisher, R. T.

Cannon, E. H.
265 see Gordon, M. S.

Cannon, E. H.
225 see Heidel, D. F.

Cannon, E. H.
255 see KleinOsowski, A.

Cannon, E. H.
293 see Rivers, J. A.

Carazzone, J. J.
93 see Commer, M.

Cattaneo, F.
127 see Fisher, R. T.

Chambliss, D., P. Pandey, T. Thakur, A. Fleshler, T. Clark, J. A. Ruddy, K. D. Gougherty, M. Kalos, L. Merithew, J. G. Thompson, and H. M. Yudenfriend
427 *An architecture for storage-hosted application extensions*

Chen, D.
189 see Vranas, P.

Chen, K.-N.
583 see Koester, S. J.

Chen, S.-H.
465 see Raoux, S.

Chen, Y.-C.
465 see Raoux, S.

Cherubini, G.
513 see Argumedo, A. J.

Cherubini, G.
493 see Pantazi, A.

Cideciyan, R. D.
513 see Argumedo, A. J.

Clark, T.
379 see Bradshaw, P. L.

Clark, T.
427 see Chambliss, D.

Commer, M., G. A. Newman, J. J. Carazzone, T. A. Dickens, K. E. Green, L. A. Wahrmund, D. E. Willen, and J. Shiu
93 *Massively parallel electrical-conductivity imaging of hydrocarbons using the IBM Blue Gene/L supercomputer*

Constantin, P.
127 see Fisher, R. T.

Dahman, K.
379 see Bradshaw, P. L.

Dang, B., S. L. Wright, P. S. Andry, E. J. Sprogis, C. K. Tsang, M. J. Interrante, B. C. Webb, R. J. Polastre, R. R. Horton, C. S. Patel, A. Sharma, J. Zheng, K. Sakuma, and J. U. Knickerbocker
599 *3D chip stacking with C4 technology*

Dang, B.
571 see Andry, P. S.

Dang, B.
553 see Knickerbocker, J. U.

Dang, B.
611 see Sakuma, K.

Deenadhayalan, V.
413 see Hafner, J. L.

Deicke, J.
319 see Oehme, S.

Dell, T. J.
307 *System Ras implications of DRAM soft errors*

Dennis, J. M., and H. M. Tufo
117 *Scaling climate simulation applications on the IBM Blue Gene/L system*

Despont, M.
493 see Pantazi, A.

Devarakonda, M.
341 see Gopisetty, S.

Devarakonda, M.
367 see Magoutis, K.

Dickens, T. A.
93 see Commer, M.

Dieberger, A.
341 see Gopisetty, S.

Ding, H.
635 see Joseph, A. J.

DiPetro, R. A.
493 see Pantazi, A.

Djurfeldt, M., M. Lundqvist, C. Johansson, M. Rehn, Ö. Ekeberg, and A. Lansner
31 *Brain-scale simulation of the neocortex on the IBM Blue Gene/L supercomputer*

Doherty, M.
635 see Joseph, A. J.

Doraiswamy, S.
379 see Bradshaw, P. L.

Drechsler, U.
481 see Karg, S. F.

Drechsler, U.
493 see Pantazi, A.

Dubey, A.
127 see Fisher, R. T.

Dunn, J.
635 see Joseph, A. J.

Dürig, U.
493 see Pantazi, A.

Duyanovich, L.
379 see Bradshaw, P. L.

Ekeberg, Ö.
31 see Djurfeldt, M.

Eleftheriou, E.
513 see Argumedo, A. J.

Eleftheriou, E.
493 see Pantazi, A.

Eleftheriou, M.
145 see Fitch, B. G.

Eleftheriou, M.
19 see Zhou, R.

Emma, P. G., and E. Kursun
541 *Is 3D chip technology the next growth engine for performance improvement?*

Erturk, M.
635 see Joseph, A. J.

Ethier, S., W. M. Tang, R. Walkup, and L. Oliker
105 *Large-scale gyrokinetic particle simulation of microturbulence in magnetically confined fusion plasmas*

Factor, M. E.
401 see Nagle, D.

Factor, M. E.
389 see Rabinovici-Cohen, S.

Fiorenza, G.
245 see Tang, H. H. K.

Fisher, R. T., L. P. Kadanoff, D. Q. Lamb, A. Dubey, T. Plewa, A. Calder, F. Cattaneo, P. Constantin, I. Foster, M. E. Papka, S. I. Abarzhi, S. M. Asida, P. M. Rich, C. C. Glendenin, K. Antypas, D. J. Sheeler, L. B. Reid, B. Gallagher, and S. G. Needham
127 *Terascale turbulence computation using the FLASH3 application framework on the IBM Blue Gene/L system*

Fitch, B. G., A. Rayshubskiy, M. Eleftheriou, T. J. C. Ward, M. E. Giampapa, M. C. Pitman, J. W. Pitera, W. C. Swope, and R. S. Germain
145 *Blue Matter: Scaling of N-body simulations to one atom per node*

Fleshler, A.
427 see Chambliss, D.

Foster, I.
127 see Fisher, R. T.

Freitas, R. F., and W. W. Wilcke
439 *Storage-class memory: The next storage system technology*

Gallagher, B.
127 see Fisher, R. T.

Gara, A.
189 see Vranas, P.

Gebreselasie, E. G.
635 see Joseph, A. J.

Germain, R. S.
145 see Fitch, B. G.

Germain, R. S.
19 see Zhou, R.

Giampapa, M. E.
145 see Fitch, B. G.

Giampapa, M. E.
189 see Vranas, P.

Giaretta, D. L.
389 see Rabinovici-Cohen, S.

Gillis, J. D.
635 see Joseph, A. J.

Glendenin, C. C.
127 see Fisher, R. T.

Gopalakrishnan, K.
449 see Burr, G. W.

Gopisetty, S., S. Agarwala, E. Butler, D. Jadav, S. Jaquet, M. Korupolu, R. Routray, P. Sarkar, A. Singh, M. Sivan-Zimet, C.-H. Tan, S. Uttamchandani, D. Merbach, S. Padbidri, A. Dieberger, E. M. Haber, E. Kandogan, C. A. Kieliszewski, D. Agrawal, M. Devarakonda, K.-W. Lee, K. Magoutis, D. C. Verma, and N. G. Vogl
341 *Evolution of storage management: Transforming raw data into information*

Gopisetty, S., E. Butler, S. Jaquet, M. Korupolu, T. K. Nayak, R. Routray, M. Seaman, A. Singh, C.-H. Tan, S. Uttamchandani, and A. Verma
353 *Automated planners for storage provisioning and disaster recovery*

Gordon, M. S., K. P. Rodbell, D. F. Heidel, C. Cabral, Jr., E. H. Cannon, and D. D. Reinhardt
265 *Single-event-upset and alpha-particle emission rate measurement techniques*

Gordon, M. S.
225 see Heidel, D. F.

Gordon, M. S.
245 see Tang, H. H. K.

Gotsmann, B.
493 see Pantazi, A.

Gougherty, K. D.
427 see Chambliss, D.

Green, K. E.
93 see Commer, M.

Gunnels, J. A.
159 see Bohm, E.

Gygi, F.
137 *Architecture of Qbox: A scalable first-principles molecular dynamics code*

Haber, E. M.
341 see Gopisetty, S.

Häberle, W.
513 see Argumedo, A. J.

Häberle, W.
493 see Pantazi, A.

Hafner, J. L., V. Deenadhayalan, W. Belluomini, and K. Rao
413 *Undetected disk errors in RAID arrays*

Hagleitner, C.
493 see Pantazi, A.

Haraden, R.
285 see Bender, C.

Hardy, J.
57 see Shave, S. R.

Haskin, R. L.
319 see Oehme, S.

Hedrick, J. L.
493 see Pantazi, A.

Heidel, D. F., K. P. Rodbell, E. H. Cannon, C. Cabral, Jr., M. S. Gordon, P. Oldiges, and H. H. K. Tang
225 *Alpha-particle-induced upsets in advanced CMOS circuits and technology*

Heidel, D. F.
265 see Gordon, M. S.

Heidel, D. F.
245 see Tang, H. H. K.

Heidelberger, P.
189 see Vranas, P.

Hellman, D. J.
513 see Argumedo, A. J.

Hill, S.
43 see Kozloski, J.

Hillsberg, B. L.
379 see Bradshaw, P. L.

Hineman, W.
379 see Bradshaw, P. L.

Hon, C.-C.
19 see Zhou, R.

Horton, R. R.
599 see Dang, B.

Horton, R. R.
553 see Knickerbocker, J. U.

Horton, R. R.
611 see Sakuma, K.

Huang, C.
177 see Kumar, S.

Hutchins, R.
513 see Argumedo, A. J.

IBM Blue Gene team
199 *Overview of the IBM Blue Gene/P Project*

Imaino, W.
513 see Argumedo, A. J.

Interrante, M. J.
599 see Dang, B.

Interrante, M. J.
553 see Knickerbocker, J. U.

Iren, S.
401 see Nagle, D.

Jadav, D.
341 see Gopisetty, S.

Janousch, M.
481 see Karg, S. F.

Jaquet, S.
341 see Gopisetty, S.

Jaquet, S.
353 see Gopisetty, S.

Jelitto, J.
513 see Argumedo, A. J.

Johansson, C.
31 see Djurfeldt, M.

Jones, C. R.
275 see Sanda, P. N.

Joseph, A. J., J. D. Gillis, M. Doherty, P. J. Lindgren, R. A. Previti-Kelly, R. M. Malladi, P.-C. Wang, M. Erturk, H. Ding, E. G. Gebreselasie, M. J. McPartlin, and J. Dunn
635 *Through-silicon vias enable next-generation SiGe power amplifiers for wireless communications*

Joseph, E. A.
481 see Karg, S. F.

Joukov, N.
367 see Magoutis, K.

Jubert, P.-O.
513 see Argumedo, A. J.

Jubin, D.
493 see Pantazi, A.

Judd, K.
513 see Argumedo, A. J.

Kaczmarski, M.
379 see Bradshaw, P. L.

Kadanoff, L. P.
127 see Fisher, R T.

Kalé, L. V.
159 see Bohm, E.

Kalé, L. V.
177 see Kumar, S.

Kalla, R.
275 see Sanda, P. N.

Kalos, M.
427 see Chambliss, D.

Kandogan, E.
341 see Gopisetty, S.

Kang, S. K.
611 see Sakuma, K.

Karg, S. F., G. I. Meijer, J. G. Bednorz, C. T. Rettner, A. G. Schrott, E. A. Joseph, C. H. Lam, M. Janousch, U. Staub, F. La Mattina, S. F. Alvarado, D. Widmer, R. Stutz, U. Drechsler, and D. Caimi
481 *Transition-metal-oxide-based resistance-change memories*

Kellington, J. W.
275 see Sanda, P. N.

Kieliszewski, C. A.
341 see Gopisetty, S.

KleinOsowski, A., E. H. Cannon, P. Oldiges, and L. Wissel
255 *Circuit design and modeling for soft errors*

Klingenberg, B. J.
379 see Bradshaw, P. L.

Knickerbocker, J. U., P. S. Andry, B. Dang, R. R. Horton, M. J. Interrante, C. S. Patel, R. J. Polastre, K. Sakuma, R. Sirdeshmukh, E. J. Sprogis, S. M. Sri-Jayantha, A. M. Stephens, A. W. Topol, C. K. Tsang, B. C. Webb, and S. L. Wright
553 *Three-dimensional silicon integration*

Knickerbocker, J. U.
599 see Dang, B.

Knickerbocker, J. U.
611 see Sakuma, K.

Knickerbocker, J. U.
623 see Sri-Jayantha, S. M.

Knoll, A.
493 see Pantazi, A.

Koester, S. J., A. M. Young, R. R. Yu, S. Purushothaman, K.-N. Chen, D. C. La Tulipe, Jr., N. Rana, L. Shi, M. R. Wordeman, and E. J. Sprogis
583 *Wafer-level 3D integration technology*

Korupolu, M.
341 see Gopisetty, S.

Korupolu, M.
353 see Gopisetty, S.

Kozloski, J., K. Sfyrakis, S. Hill, F. Schürmann, C. Peck, and H. Markram
43 *Identifying, tabulating, and analyzing contacts between branched neuron morphologies*

Krebs, D.
465 see Raoux, S.

Kudva, P.
285 see Bender, C.

Kudva, P.
293 see Rivers, J. A.

Kudva, P.
275 see Sanda, P. N.

Kumar, S., C. Huang, G. Zheng, E. Bohm, A. Bhatele, J. C. Phillips, H. Yu, and L. V. Kalé
177 *Scalable molecular dynamics with NAMD on the IBM Blue Gene/L system*

Kumar, S.
159 see Bohm, E.

Kurdi, B. N.
449 see Burr, G. W.

Kursun, E.
541 see Emma, P. G.

Lai, S. K.
529 *Flash memories: Successes and challenges*

Lam, C. H.
449 see Burr, G. W.

Lam, C. H.
481 see Karg, S. F

Lam, C. H.
465 see Raoux, S.

La Mattina, F.
481 see Karg, S. F.

Lamb, D. Q.
127 see Fisher, R. T.

Lanjewar, U., M. Naik, and R. Tewari
329 *Glamor: An architecture for file system federation*

Lansner, A.
31 see Djurfeldt, M.

Lantz, M. A.
513 see Argumedo, A. J.

Lantz, M. A.
493 see Pantazi, A.

La Tulipe, D. C., Jr.
583 see Koester, S. J.

Lee, K.-W.
341 see Gopisetty, S.

Lindgren, P. J.
635 see Joseph, A. J.

Lockwood, R.
275 see Sanda, P. N.

Lundqvist, M.
31 see Djurfeldt, M.

Lung, H.-L.
465 see Raoux, S.

Ma, X.
379 see Bradshaw, P. L.

Magoutis, K., M. Devarakonda, N. Joukov, and N. G. Vogl
367 *Galapagos: Model-driven discovery of end-to-end application–storage relationships in distributed systems*

Magoutis, K.
341 see Gopisetty, S.

Malladi, R. M.
635 see Joseph, A. J.

Manzer, D. G.
571 see Andry, P. S.

Maria, J.
611 see Sakuma, K.

Markram, H.
43 see Kozloski, J.

Martyna, G. J.
159 see Bohm, E.

Mata, R.
285 see Bender, C.

McAllister, J. S.
69 see Pang, T.-P.

McBeth, R. B.
275 see Sanda, P. N.

McClelland, G. M.
513 see Argumedo, A. J.

McPartlin, M. J.
635 see Joseph, A. J.

McVicker, G.
623 see Sri-Jayantha, S. M.

Meijer, G. I.
481 see Karg, S. F.

Merbach, D.
341 see Gopisetty, S.

Merithew, L.
427 see Chambliss, D.

Mittelholzer, T.
513 see Argumedo, A. J.

Mullins, T. J.
69 see Pang, Y.-P.

Murray, C. E.
245 see Tang, H. H. K.

Musselman, R. G.
69 see Pang Y.-P.

Nagle, D., M. E. Factor, S. Iren, D. Naor, E. Riedel, O. Rodeh, and J. Satran
401 *The ANSI T10 object-based storage standard and current implementations*

Naik, M.
329 see Lanjewar, U.

Naor, D.
401 see Nagle, D.

Naor, D.
389 see Rabinovici-Cohen, S.

Narayan, C.
513 see Argumedo, A. J.

Nayak, T. K.
353 see Gopisetty, S.

Needham, S. G.
127 see Fisher, R. T.

Newman, G. A.
93 see Commer, M.

Oehme, S., J. Deicke, J.-P. Akelbein, R. Sahlberg, A. Tridgell, and R. L. Haskin
319 *IBM Scale out File Services: Reinventing network-attached storage*

Ölçer, S.
513 see Argumedo, A. J.

Oldiges, P.
225 see Heidel, D. F.

Oldiges, P.
255 see KleinOsowski, A.

Oliker, L.
105 see Ethier, S.

Padbidri, S.
341 see Gopisetty, S.

Pandey, P.
427 see Chambliss, D.

Pang, Y.-P., T. J. Mullins, B. A. Swartz, J. S. McAllister, B. E. Smith, C. J. Archer, R. G. Musselman, A. E. Peters, B. P. Wallenfelt, and K. W. Pinnow
69 *EUDOC on the IBM Blue Gene/L system: Accelerating the transfer of drug discoveries from laboratory to patient*

Pantazi, A., A. Sebastian, T. A. Antonakopoulos, T. Bächtold, A. R. Bonaccio, J. Bonan, G. Cherubini, M. Despont, R. A. DiPietro, U. Drechsler, U. Dürig, B. Gotsmann, W. Häberle, C. Hagleitner, J. L. Hedrick, D. Jubin, A. Knoll, M. A. Lantz, J. Pentarakis, H. Pozidis, R. C. Pratt, H. Rothuizen, R. Stutz, M. Varsamou, D. Wiesmann, and E. Eleftheriou
493 *Prode-based ultrahigh-density storage technology*

Papka, M. E.
127 see Fisher, R. T.

Patel, C. S.
599 see Dang, B.

Patel, C. S.
553 see Knickerbocker, J. U.

Patel, C. S.
611 see Sakuma, K.

Peck, C.
43 see Kozloski, J.

Pentarakis, J.
493 see Pantazi, A.

Peters, A. E.
69 see Pang, Y.-P.

Phillips, J. C.
177 see Kumar, S.

Pinnow, K. W.
69 see Pang, Y.-P.

Pitera, J. W.
145 see Fitch, B. G.

Pitman, M. C.
145 see Fitch, B. G.

Plewa, T.
127 see Fisher, R. T.

Pokala, V.
285 see Bender, C.

Polastre, R. J.
599 see Dang, B.

Polastre, R. J.
553 see Knickerbocker, J. U.

Polastre, R. J.
611 see Sakuma, K.

Pozidis, H.
493 see Pantazi, A.

Pratt, R. C.
493 see Pantazi, A.

Previti-Kelly, R. A.
635 see Joseph, A. J.

Purushothaman, S.
583 see Koester, S. J.

Qian, B.
7 see Raman, S.

Rabinovici-Cohen, S., M. E. Factor, D. Naor, L. Ramati, P. Reshef, S. Ronan, J. Satran, and D. L. Giaretta
389 *Preservation DataStores: New storage paradigm for preservation environments*

Raman, S., B. Qian, D. Baker, and R. C. Walker
7 *Advances in Rosetta protein structure prediction on massively parallel systems*

Ramati, L.
389 see Raninovici-Cohen, S.

Rana, N.
583 see Koester, S. J.

Rao, K.
413 see Hafner, J. L.

Raoux, S., G. W. Burr, M. J. Breitwisch, C. T. Rettner, Y.-C. Chen, R. M. Shelby, M. Salinga, D. Krebs, S.-H Chen, H.-L. Lung, and C. H. Lam
465 *Phase-change random access memory: A scalable technology*

Rayshubskiy, A.
145 see Fitch, B. G.

Rees, R.
379 see Bradshaw, P. L.

Rehn, M.
31 see Djurfeldt, M.

Reid, L. B.
127 see Fisher, R. T.

Reinhardt, D. D.
265 see Gordon, M. S.

Reshef, P.
389 see Rabinovici-Cohen, S.

Rettner, C. T.
481 see Karg, S. F.

Rettner, C. T.
465 see Raoux, S.

Rich, P. M.
127 see Fisher, R. T.

Riedel, E.
401 see Nagle, D.

Rivers, J. A., P. Bose, P. Kudva, J.-D. Wellman, P. N. Sanda, E. H. Cannon, and L. C. Alves
293 *Phaser: Phased methodology for modeling the system-level effects of soft errors*

Rodbell, K. P.
265 see Gordon, M. S.

Rodbell, K. P.
225 see Heidel, D. F.

Rodbell, K. P.
245 see Tang, H. H. K.

Rodeh, O.
401 see Nagle, D.

Ronen, S.
389 see Rabinovici-Cohen, S.

Rothuizen, H.
493 see Pantazi, A.

Routray, R.
341 see Gopisetty, S.

Routray, R.
353 see Gopisetty, S.

Royyuru, A. K.
19 see Zhou, R.

Ruddy, J. A.
427 see Chambliss, D.

Sahlberg, R.
319 see Oehme, S.

Sakuma, K., P. S. Andry, C. K. Tsang, S. L. Wright, B. Dang, C. S. Patel, B. C. Webb, J. Maria, E. J. Sprogis, S. K. Kang, R. J. Polastre, R. R. Horton, and J. U. Knickerbocker
611 *3D chip-stacking technology with through-silicon vias and low-volume lead-free interconnections.*

Sakuma, K.
599 see Dang, B.

Sakuma, K.
553 see Knickerbocker, J. U.

Salapura, V.
189 see Vranas, P.

Salinga, M.
465 see Raoux, S.

Sanda, P. N., J. W. Kellington, P. Kudva, R. Kalla, R. B. McBeth, J. Ackaret, R. Lockwood, J. Schumann, and C. R. Jones
275 *Soft-error resilience of the IBM POWER6 processor*

Sanda, P. N.
285 see Bender, C.

Sanda, P. N.
293 see Rivers, J. A.

Sarkar, P.
341 see Gopisetty, S.

Satran, J.
401 see Nagle, D.

Satran, J.
389 see Rabinovici-Cohen, S.

Schallhorn, M.
285 see Bender, C.

Schrott, A. G.
481 see Karg, S. F.

Schumann, J.
275 see Sanda, P. N.

Schürmann, E.
43 see Kozloski, J.

Scott, J. C.
449 see Burr, G. W.

Seaman, M.
353 see Gopisetty, S.

Sebastian, A.
493 see Pantazi, A.

Seger, P. J.
513 see Argumedo, A. J.

Sexton, J. C.
189 see Vranas, P.

Sfyrakis, K.
43 see Kozłoski, J.

Sharma, A.
599 see Dang, B.

Shave, S. R., P. Taylor, M. Walkinshaw, L. Smith, J. Hardy, and A. Trew
57 *Ligand discovery on massively parallel systems*

Sheeler, D. J.
127 see Fisher, R. T.

Shelby, R. M.
465 see Raoux, S.

Shenoy, R. S.
449 see Burr, G. W.

Shi, L.
583 see Koester, S. J.

Shiu, J.
93 see Commer, M.

Singh, A.
341 see Gopisetty, S.

Singh, A.
353 see Gopisetty, S.

Sirdeshmukh, R.
553 see Knickerbocker, J. U.

Sivan-Zimet, M.
341 see Gopisetty, S.

Smith, B. E.
69 see Pang, Y.-P.

Smith, L.
57 see Shave, S. R.

Soltz, R.
189 see Vranas, P.

Sprogis, E. J.
571 see Andry, P. S.

Sprogis, E. J.
599 see Dang, B.

Sprogis, E. J.
553 see Knickerbocker, J. U.

Sprogis, E. J.
583 see Koester, S. J.

Sprogis, E. J.
611 see Sakuma, K.

Sri-Jayantha, S. M., G. McVicker, K. Bernstein, and J. U. Knickerbocker
623 *Thermomechanical modeling of 3D electronic packages*

Sri-Jayantha, S. M.
553 see Knickerbocker, J. U.

Staub, U.
481 see Karg, S. F.

Stephens, A. M.
553 see Knickerbocker, J. U.

Stutz, R.
481 see Karg, S. F.

Stutz, R.
493 see Pantazi, A.

Swartz, B. A.
69 see Pang, Y.-P

Swope, W. C.
145 see Fitch, B. G.

Tan, C. -H.
341 see Gopisetty, S.

Tan, C.-H.
353 see Gopisetty, S.

Tang, H. H. K.
233 *SEMM-2: A new generation of single-event-effect modeling tools*

Tang, H. H. K., C. E. Murray, G. Fiorenza, K. P. Rodbell, M. S. Gordon, and D. F. Heidel
245 *New simulation methodology for effects of radiation in semiconductor chip structures*

Tang, H. H. K.
225 see Heidel, D. F.

Tang, W. M.
105 see Ethier, S.

Taylor, P.
57 see Shave, S. R.

Tewari, R.
329 see Lanjewar, U.

Thakur, T.
427 see Chambliss, D.

Thompson, J. G.
427 see Chambliss, D.

Topol, A. W.
553 see Knickerbocker, J. U.

Trew, A.
57 see Shave, S. R.

Tridgell, A.
319 see Oehme, S.

Tsang, C. K.
571 see Andry, P. S.

Tsang, C. K.
599 see Dang, B.

Tsang, C. K.
553 see Knickerbocker, J. U.

Tsang, C. K.
611 see Sakuma, K.

Tuckerman, M. E.
159 see Bohm, E.

Tufo, H. M.
117 see Dennis, J. M.

Uttamchandani, S.
341 see Gopisetty, S.

Uttamchandani, S.
353 see Gopisetty, S.

Varsamou, M.
493 see Pantazi, A.

Verma, A.
353 see Gopisetty, S.

Verma, D. C.
341 see Gopisetty, S.

Vezolle, P.
83 see Calandra, H.

Vogi, N. G.
341 see Gopisetty, S.

Vogi, N. G.
367 see Magoutis, K.

Vranas, P., M. A. Blumrich, D. Chen, A. Gara, M. E. Giampapa, P. Heidelberger, V. Salapura, J. C. Sexton, R. Soltz, and G. Bhanot
189 *Massively parallel quantum chromodynamics*

Wahrmund, L. A.
93 see Commer, M.

Walker, R. C.
7 see Raman, S.

Walkinshaw, M.
57 see Shave, S. R.

Walkup, R.
105 see Ethier, S.

Wallenfelt, B. P.
69 see Pang, Y.-P.

Wang, P.-C.
635 see Joseph, A. J.

Ward, T. J. C.
145 see Fitch, B. G.

Webb, B. C.
571 see Andry, P. S.

Webb, B. C.
599 see Dang, B.

Webb, B. C.
553 see Knickerbocker, J. U.

Webb, B. C.
611 see Sakuma, K.

Wellman, J.-D.
293 see Rivers, J. A.

Widmer, D.
481 see Karg, S. F.

Wiesmann, D.
493 see Pantazi, A.

Wilcke, W. W.
439 see Freitas, R. F.

Willen, D. E.
93 see Commer, M.

Wissel, L.
255 see KleinOsowski, A.

Wordeman, M. R.
583 see Koester, S. J.

Wright, S. L.
571 see Andry, P. S.

Wright, S. L.
599 see Dang, B.

Wright, S. L.
553 see Knickerbocker, J. U.

Wright, S. L.
611 see Sakuma, K.

Young, A. M.
583 see Koester, S. J.

Yu, H.
177 see Kumar, S.

Yu, R. R.
583 see Koester, S. J.

Yudenfriend, H. M.
427 see Chambliss, D.

Zheng, G.
177 see Kumar, S.

Zheng, J.
599 see Dang, B.

Zhou, R., M. Eleftheriou, C.-C. Hon, R. S. Germain, A. K. Royyuru, and B. J. Berne
19 *Massively parallel molecular dynamics simulations of lysozyme unfolding*

Subject index for papers in Volume 52

Each index entry below is accompanied by an author's name and a page number; the author index contains the title of the paper and the names of coauthors, if any.

Subject	Author	Page
Amplification		
Through-silicon vias enable next-generation SiGe power amplifiers for wireless communications	Joseph	635
Analytical models		
Architecture of Qbox: A scalable first-principles molecular dynamics code	Gygi	137
Blue Matter: Scaling of N-body simulations to one atom per node	Fitch	145
Brain-scale simulation of the neocortex on the IBM Blue Gene/L supercomputer	Djurfeldt	31
Phaser: Phased methodology for modeling the system-level effects of soft errors	Rivers	293
Atmospheric processes		
Scaling climate simulation applications on the IBM Blue Gene/L system	Dennis	117
Single-event-upset and alpha-particle emission rate measurement techniques	Gordon	265
Atomic force microscopy (AFM)		
Probe-based ultrahigh-density storage technology	Pantazi	493
Beams, charged particle		
Single-event-upset and alpha-particle emission rate measurement techniques	Gordon	265
Biology and biomedical studies		
Advances in Rosetta protein structure prediction on massively parallel systems	Raman	7
Brain-scale simulation of the neocortex on the IBM Blue Gene/L supercomputer	Djurfeldt	31
EUDOC on the IBM Blue Gene/L system: Accelerating the transfer of drug discoveries from laboratory to patient	Pang	69
Fine-grained parallelization of the Car–Parrinello *ab initio* molecular dynamics method on the IBM Blue Gene/L supercomputer	Bohm	159
Identifying, tabulating, and analyzing contacts between branched neuron morphologies	Kozloski	43
Ligand discovery on massively parallel systems	Shave	57
Massively parallel molecular dynamics simulations of lysozyme unfolding	Zhou	19
Scalable molecular dynamics with NAMD on the IBM Blue Gene/L system	Kumar	177
Circuit and device technology		
Circuit design and modeling for soft errors	KleinOsowski	255
3D chip-stacking technology with through-silicon vias and low-volume lead-free interconnections	Sakuma	611
3D chip stacking with C4 technology	Dang	599
Through-silicon vias enable next-generation SiGe power amplifiers for wireless communications	Joseph	635
Circuit theory and analysis		
New simulation methodology for effects of radiation in semiconductor chip structures	Tang	245
SEMM-2: A new generation of single-event-effect modeling tools	Tang	233
CMOS		
Alpha-particle-induced upsets in advanced CMOS circuits and technology	Heidel	225
Communications and communication networks		
IBM Scale out File Services: Reinventing network-attached storage	Oehme	319
Computer applications		
Galapagos: Model-driven discovery of end-to-end application–storage relationships in distributed systems	Magoutis	367
Computer architecture		
An architecture for storage-hosted application extensions	Chambliss	427
Glamor: An architecture for file system federation	Lanjewar	329
Is 3D chip technology the next growth engine for performance improvement?	Emma	541
Overview of the IBM Blue Gene/P project	Haring	199
Computer organization and design		
Is 3D chip Technology the next growth engine for performance improvement?	Emma	541
Computer security		
The ANSI T10 object-based storage standard and current implementations	Nagle	401
Controlled-collapse chip connection (C4) technology		
3D chip stacking with C4 technology	Dang	599
Cosmic rays		
Alpha-particle-induced upsets in advanced CMOS circuits and technology	Heidel	225
Circuit design and modeling for soft errors	KleinOsowski	255

New simulation methodology for effects of radiation in semiconductor chip structures — Tang 245
SEMM-2: A new generation of single-event-effect modeling tools — Tang 233
Single-event-upset and alpha-particle emission rate measurement techniques — Gordon 265

Cryptography
The ANSI T10 object-based storage standard and current implementations — Nagle 401

Design automation
Automated planners for storage provisioning and disaster recovery — Gopisetty 353

Digital libraries
Preservation DataStores: New storage paradigm for preservation environments — Rabinovici-Cohen 389

Distributed processing
Galapagos: Model-driven discovery of end-to-end application–storage relationships in distributed systems — Magoutis 367

Drug design
EUDOC on the IBM Blue Gene/L system: Accelerating the transfer of drug discoveries from laboratory to patient — Pang 69

Environment
Scaling climate simulation applications on the IBM Blue Gene/L system — Dennis 117

Error control and recovery
Circuit design and modeling for soft errors — KleinOsowski 255

Error detection and correction
Undetected disk errors in RAID arrays — Hafner 413

Fabrication
Thermomechanical modeling of 3D electronic packages — Sri-Jayantha 623
Three-dimensional silicon integration — Knickerbocker 553

Fault tolerance
Soft-error resilience of the IBM POWER6 processor — Sanda 275

Ferroelectrics
Overview of candidate device technologies for storage-class memory — Burr 449

File systems
Archive storage system design for long-term storage of massive amounts of data — Bradshaw 379
Glamor: An architecture for file system federation — Lanjewar 329
IBM Scale out File Services: Reinventing network-attached storage — Oehme 319

Finite element analysis
Thermomechanical modeling of 3D electronic packages — Sri-Jayantha 623

Fluids and fluid dynamics
Terascale turbulence computation using the FLASH3 application framework on the IBM Blue Gene/L system — Fisher 127

Genomic and proteomic analysis
Ligand discovery on massively parallel systems — Shave 57

Geology
A massively parallel implementation of the common azimuth pre-stack depth migration — Calandra 83
Massively parallel electrical-conductivity imaging of hydrocarbons using the IBM Blue Gene/L supercomputer — Commer 93

I/O devices, systems, and technology
Soft-error resilience of the IBM POWER6 processor input/output subsystem — Bender 285

IBM POWER6
Soft-error resilience of the IBM POWER6 processor — Sanda 275
Soft-error resilience of the IBM POWER6 processor input/output subsystem — Bender 285

Interconnection technology
3D chip-stacking technology with through-silicon vias and low-volume lead-free interconnections — Sakuma 611
Wafer-level 3D integration technology — Koester 583

Magnetic head–tape interaction
Scaling tape-recording areal densities to 100 Gb/in^2 — Argumedo 513

Magnetic tape
Scaling tape-recording areal densities to 100 Gb/in^2 — Argumedo 513

Materials technology
Alpha-particle-induced upsets in advanced CMOS circuits and technology — Heidel 225
Circuit design and modeling for soft errors — KleinOsowski 255
Fabrication and characterization of robust through-silicon vias for silicon-carrier applications — Andry 571

Memory (computer) design and technology
Fabrication and characterization of robust through-silicon vias for silicon-carrier applications — Andry 571
Flash memories: Successes and challenges — Lai 529
Overview of candidate device technologies for storage-class memory — Burr 449
Phase-change random access memory: A scalable technology — Raoux 465
Probe-based ultrahigh-density storage technology — Pantazi 493
Storage-class memory: The next storage system technology — Freitas 439
Transition-metal-oxide-based resistance-change memories — Karg 481

Memory, random-access
Overview of candidate device technologies for storage-class memory — Burr 449
Phase-change random access memory: A scalable technology — Raoux 465
Probe-based ultrahigh-density storage technology — Pantazi 493
Storage-class memory: The next storage system technology — Freitas 439
Transition-metal-oxide-based resistance-change memories — Karg 481

Microelectromechanical systems (MEMS)
Probe-based ultrahigh-density storage technology — Pantazi — 493

Microprocessor systems and applications
Soft-error resilience of the IBM POWER6 processor — Sanda — 275

Models and modeling
New simulation methodology for effects of radiation in semiconductor chip structures — Tang — 245
SEMM-2: A new generation of single-event-effect modeling tools — Tang — 233

Molecular structure modeling
Architecture of Qbox: A scalable first-principles molecular dynamics code — Gygi — 137
Blue Matter: Scaling of N-body simulations to one atom per node — Fitch — 145
Fine-grained parallelization of the Car–Parrinello *ab initio* molecular dynamics method on the IBM Blue Gene/L supercomputer — Bohm — 159
Massively parallel molecular dynamics simulations of lysozyme unfolding — Zhou — 19
Scalable molecular dynamics with NAMD on the IBM Blue Gene/L system — Kumar — 177

Monte Carlo methods
Blue Matter: Scaling of N-body simulations to one atom per node — Fitch — 145

Multichip modules (MCMs)
Fabrication and characterization of robust through-silicon vias for silicon-carrier applications — Andry — 571
Is 3D chip technology the next growth engine for performance improvement? — Emma — 541

Packaging
Fabrication and characterization of robust through-silicon vias for silicon-carrier applications — Andry — 571
Is 3D chip technology the next growth engine for performance improvement? — Emma — 541

Parallel processing
Advances in Rosetta protein structure prediction on massively parallel systems — Raman — 7
A massively parallel implementation of the common azimuth pre-stack depth migration — Calandra — 83
Architecture of Qbox: A scalable first-principles molecular dynamics code — Gygi — 137
Blue Matter: Scaling of N-body simulations to one atom per node — Fitch — 145
Brain-scale simulation of the neocortex on the IBM Blue Gene/L supercomputer — Djurfeldt — 31
EUDOC on the IBM Blue Gene/L system: Accelerating the transfer of drug discoveries from laboratory to patient — Pang — 69
Fine-grained parallelization of the Car–Parrinello *ab initio* molecular dynamics method on the IBM Blue Gene/L super computer — Bohm — 159
Identifying, tabulating, and analyzing contacts between branched neuron morphologies — Kozloski — 43
Large-scale gyrokinetic particle simulation of microturbulence in magnetically confined fusion plasmas — Ethier — 105
Ligand discovery on massively parallel systems — Shave — 57
Massively parallel electrical-conductivity imaging of hydrocarbons using the IBM Blue Gene/L supercomputer — Commer — 93
Massively parallel molecular dynamics simulations of lysozyme unfolding — Zhou — 19
Massively parallel quantum chromodynamics — Vranas — 189
Overview of the IBM Blue Gene/P project — Haring — 199
Scalable molecular dynamics with NAMD on the IBM Blue Gene/L system — Kumar — 177
Scaling climate simulation applications on the IBM Blue Gene/L system — Dennis — 117
Terascale turbulence computation using the FLASH3 application framwork on the IBM Blue Gene/L system — Fisher — 127

Physics, solid state
Overview of candidate device technologies for storage-class memory — Burr — 449

Plasmas
Large-scale gyrokinetic particle simulation of microturbulence in magnetically confined fusion plasmas — Ethier — 105

Power management
Thermomechanical modeling of 3D electronic packages — Sri-Jayantha — 623

Protein folding
Advances in Rosetta protein structure prediction on massively parallel systems — Raman — 7
Massively parallel molecular dynamics simulations of lysozyme unfolding — Zhou — 19

Quantum theory and effects
Massively parallel quantum chromodynamics — Vranas — 189

Reliability
Soft-error resilience of the IBM POWER6 processor input/output subsystem — Bender — 285
System RAS implications of DRAM soft errors — Dell — 307

Semiconductor devices
Overview of candidate device technologies for storage-class memory — Burr — 449
Thermomechanical modeling of 3D electronic packages — Sri-Jayantha — 623
Three-dimensional silicon integration — Knickerbocker — 553

Semiconductor technology
Alpha-particle-induced upsets in advanced CMOS circuits and technology — Heidel — 225
Fabrication and characterization of robust through-silicon vias for silicon-carrier applications — Andry — 571
Is 3D chip technology the next growth engine for performance improvement? — Emma — 541
Overview of candidate device technologies for storage-class memory — Burr — 449
Thermomechanical modeling of 3D electronic packages — Sri-Jayantha — 623

3D chip-stacking technology with through-silicon vias and low-volume lead-free interconnections — Sakuma — 611
3D chip stacking with C4 technology — Dang — 599
Three-dimensional silicon integration — Knickerbocker — 553
Through-silicon vias enable next-generation SiGe power amplifiers for wireless communications — Joseph — 635

Silicon
Three-dimensional silicon integration — Knickerbocker — 553

Simulation
Architecture of Qbox: A scalable first-principles molecular dynamics code — Gygi — 137
Blue Matter: Scaling of N-body simulations to one atom per node — Fitch — 145
Brain-scale simulation of the neocortex on the IBM Blue Gene/L supercomputer — Djurfeldt — 31
Large-scale gyrokinetic particle simulation of microturbulence in magnetically confined fusion plasmas — Ethier — 105
Massively parallel molecular dynamics simulations of lysozyme unfolding — Zhou — 19
Phaser: Phased methodology for modeling the system-level effects of soft errors — Rivers — 293
Scaling climate simulation applications on the IBM Blue Gene/L system — Dennis — 117
Terascale turbulence computation using the FLASH3 application framework on the IBM Blue Gene/L system — Fisher — 127

Soft errors
Alpha-particle-induced upsets in advanced CMOS circuits and technology — Heidel — 225
Circuit design and modeling for soft errors — KleinOsowski — 255
New simulation methodology for effects of radiation in semiconductor chip structures — Tang — 245
Phaser: Phased methodology for modeling the system-level effects of soft errors — Rivers — 293
SEMM-2: A new generation of single-event-effect modeling tools — Tang — 233
Single-event-upset and alpha-particle emission rate measurement techniques — Gordon — 265
Soft-error resilience of the IBM POWER6 processor — Sanda — 275
Soft-error resilience of the IBM POWER6 processor input/output subsystem — Bender — 285
System RAS implications of DRAM soft errors — Dell — 307

Storage (computer) devices and systems
An architecture for storage-hosted application extensions — Chambliss — 427
Archive storage system design for long-term storage of massive amounts of data — Bradshaw — 379
Automated planners for storage provisioning and diaster recovery — Gopisetty — 353
Evolution of storage management: Transforming raw data into information — Gopisetty — 341
Flash memories: Successes and challenges — Lai — 529
Galapagos: Model-driven discovery of end-to-end application-storage relationships in distributed systems — Magoutis — 367
Glamor: An architecture for file system federation — Lanjewar — 329
IBM Scale out File Services: Reinventing network-attached storage — Oehme — 319
Overview of candidate device technologies for storage-class memory — Burr — 449
Phase-change random access memory: A scalable technology — Raoux — 465
Preservation DataStores: New storage paradigm for preservation environments — Rabinovici-Cohen — 389
Probe-based ultrahigh-density storage technology — Pantazi — 493
Scaling tape-recording areal densities to 100 Gb/in^2 — Argumedo — 513
Storage-class memory: The next storage system technology — Freitas — 439
The ANSI T10 object-based storage standard and current implementations — Nagle — 401
Transition-metal-oxide-based resistance-change memories — Karg — 481
Undetected disk errors in RAID arrays — Hafner — 413

Storage hierarchies
Automated planners for storage provisioning and disaster recovery — Gopisetty — 353
Evolution of storage management: Transforming raw data into information — Gopisetty — 341
IBM Scale out File Services: Reinventing network-attached storage — Oehme — 319
Preservation DataStores: New storage paradigm for preservation environments — Rabinovici-Cohen — 389

Supercomputing
Advances in Rosetta protein structure prediction on massively parallel systems — Raman — 7
A massively parallel implementation of the common azimuth pre-stack depth migration — Calandra — 83
Architecture of Qbox: A scalable first-principles molecular dynamics code — Gygi — 137
Blue Matter: Scaling of N-body simulations to one atom per node — Fitch — 145
Brain-scale simulation of the neocortex on the IBM Blue Gene/L supercomputer — Djurfeldt — 31
EUDOC on the IBM Blue Gene/L system: Accelerating the transfer of drug discoveries from laboratory to patient — Pang — 69
Fine-grained parallelization of the Car–Parrinello *ab initio* molecular dynamics method on the IBM Blue Gene/L supercomputer — Bohm — 159
Identifying, tabulating, and analyzing contacts between branched neuron morphologies — Kozloski — 43
Large-scale gyrokinetic particle simulation of microturbulence in magnetically confined fusion plasmas — Ethier — 105
Ligand discovery on massively parallel systems — Shave — 57
Massively parallel electrical-conductivity imaging of hydrocarbons using the IBM Blue Gene/L supercomputer — Commer — 93
Massively parallel molecular dynamics simulations of lysozyme unfolding — Zhou — 19
Massively parallel quantum chromodynamics — Vranas — 189

Overview of the IBM Blue Gene/P project — Haring — 199
Scalable molecular dynamics with NAMD on the IBM Blue Gene/L system — Kumar — 177
Scaling climate simulation applications on the IBM Blue Gene/L system — Dennis — 117
Terascale turbulence computation using the FLASH3 application framework on the IBM Blue Gene/L system — Fisher — 127

System-on-a-chip (SoC)
Fabrication and characterization of robust through-silicon vias for silicon-carrier applications — Andry — 571